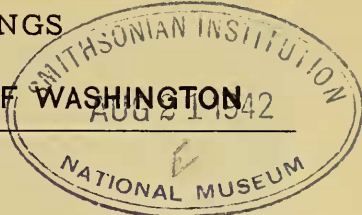


PROCEEDINGS
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NOMENCLATORIAL CHANGES IN GLOSSOPETALON
(CELASTRACEAE).

BY HAROLD ST. JOHN,
University of Hawaii, Honolulu.

The correct name of a genus of plants is easily ascertained in many groups, but for others with an involved history, it is determined only by a careful application of the laws of nomenclature. These laws are intricate and their details are tedious, but taxonomists must follow them to reach the goal of stability in nomenclature.

Miss Margaret Ensign has recently published a revision of the genus *Forsellesia* (Am. Midl. Nat. 27: 501-511, 1942). She adopted this as the valid generic name and rejected *Glossopetalon*. The writer, a few years ago, decided otherwise and published a new species of this group under the generic name *Glossopetalon*. He has now reexamined the data and reapplied the nomenclatorial laws and his conclusions still differ from those of Ensign.

The genus is of anomalous structure, simulating several families, but it is now placed in the Celastraceae. It was first described by Dr. Asa Gray and named *Glossopetalon* with the single species *G. spinescens* from New Mexico (Plantae Wrightianae 2: 29-30, tab. 12B, 1853).

After Gray had added a second species to the genus, Prof. Edward L. Greene called attention to a name which he said was an earlier homonym, and proposed the new name *Forsellesia* to replace Gray's generic name (Erythea 1: 206, 1893). Greene wrote as follows, "*Glossopetalon*, A. Gray, Pl. Wright. ii. 29 (1853), not of Schreber, Gen. i. 205 (1789)." Actually, the genus published by Schreber was *Glossopetalum* (Schreber in Linnaeus, Gen. Pl. ed. 8, 1: 205, 1789), an invalid synonym of *Gouppia* of Aublet (1775), a member of the Celastraceae from Guiana. Gray worked in accord with the Kew Rules of Nomenclature. By his practice the existence of an earlier invalid homonym did not prevent the use of a later valid homonym.

Greene was an independent worker, following his own standards. Still, he sympathized with many of the nomenclatorial ideas of the leaders of

the group that framed the American Code. He attended the Madison Congress and was its first choice for president, but he did not consistently follow their code. However, in this instance, he did so. The article VI of the Rochester Code is as follows, "Similar generic names are not to be rejected on account of slight differences, except in the spelling of the same word; for example *Apios* and *Apium* are to be retained, but of *Epidendrum* and *Epidendron*, *Asterocarpus* and *Astrocarpus*, the latter is to be rejected." (Torrey Bot. Club, Bull. 19: 291, 1892). On this basis Greene rejected *Glossopetalon* Gray (1853) because of the earlier *Glossopetalum* Schreber (1789), and he renamed Gray's genus as *Forsellesia*.

When the writer first prepared his manuscript describing as new *Glossopetalon stipuliferum*, the International Rules of Botanical Nomenclature, Vienna (1905) and Brussels (1910) were in force. The applicable provisions were clear and definite, "Art. 57. . . . When the difference between two names, especially generic names, lies in the termination, these names are to be regarded as distinct even though differing by one letter only. Examples: *Rubia* and *Rubus*, *Monochaete* and *Monochaetum*, *Peponia* and *Peponium*, *Iria* and *Iris*." Article 50 also was applicable.

Before the writer's book was printed, the new International Rules, Cambridge (1930) and Amsterdam (1935) were available, and he checked all names in his manuscript by these altered rules. *Glossopetalon* Gray still seemed the valid name for the genus.

Now we have a new revision of the genus by Ensign who seems to have done a good job taxonomically on this difficult group with mostly very minute and rather technical characters. On the other hand, on its nomenclature, her judgment seems questionable. The pertinent parts of her discussion are quoted. "The genus *Forsellesia* was first described as *Glossopetalon* by Gray, *Plantae Wrightianae* 2:29. 1853. However, E. L. Greene discovered that the name was a homonym (*Glossopetalum*, Schreb., *Gen.* 1:205. 1789) and proposed that the group should be given the generic name *Forsellesia*, *Erythea* 1:206. 1893. . . . Since the International Rules of Nomenclature do not list *Glossopetalon* in the *Nomina Conservanda*, and since they do not recognize orthographic variants (Art. 70, note 4; Greek 'petalon,' Latin 'petalum'). I am using the name *Forsellesia* in this paper."

As Ensign indicates, the rule of the Cambridge Congress applicable to this case is Article 70. This expands the brief, definite provisions of the earlier Vienna (1905) rules, introducing qualifications and many examples. Unfortunately, some of these examples were ill chosen, and as listed partially confuse the applications of the law. Many times the writer has studied this new wording and he has tabulated the examples hoping to find complete agreement and clarity, but in vain.

Fortunately, for the particular nomenclatorial problem in question, there seem to be no complications. The rule reads, "Art. 70. The original spelling of a name or epithet must be retained, except in the case of a typographic error, or of a clearly unintentional orthographic error. When the difference between two generic names lies in the termination, these names must be regarded as distinct, even though differing by one letter

only. This does not apply to mere orthographic variants of the same name." If a name is a later homonym, it is rejected under the provisions of Article 61. There were two amendments to the Article 70 adopted at Amsterdam (1935) but they are not pertinent to this problem. The question is, whether *Glossopetalum* and *Glossopetalon* are different names, or orthographic variants and hence homonyms. We quote in full from Article 70, Note 4,

"Examples of orthographic variants:—Generic names: *Astrostemma* and *Asterostemma*, *Pleuripetalum*, and *Pleuropetalum*, *Columella* and *Columellia*, both commemorating Columella, the Roman writer on agriculture, *Eschweilera* and *Eschweilera*, *Skylanthus* and *Scytanthus*. The four generic names *Bradlea* Adans., *Bradlaeia* Neck., *Bradleja* Banks ex Gaertn., *Bradleya* Vell., all commemorating Richard Bradley (1675–1732), must be treated as orthographic variants because each of them has been spelt by subsequent authors both as 'Bradleia' and as 'Bradleya' and one only can be used without serious risk of confusion." If these variants are examined it will be seen that they differ from each other either in the connecting vowel used between the two word roots or in the particular vowel or consonant used within the word in latinization, as a *c* for a *k*, etc.

"Examples of different names:—*Rubia* and *Rubus*, *Monochaete* and *Monochaetum*, *Peponia* and *Peponium*, *Iria* and *Iris*, *Desmostachys* and *Desmostachya*, *Symphostemon* and *Symphostemon*, *Gerrardina* and *Gerardiina*, *Durvillea* and *Urvillea*, *Elodes* and *Elodea*, *Peltophorus* (Gramineae) and *Peltophorum* (Leguminosae)." Two of these pairs, including *Symphostemon* and *Gerrardina* show different connecting vowels or different rendering of the internal consonants. They are comparable to the orthographic variants, and had they been listed with that group, these examples would have been consistent. All the other examples have the paired names differing only by one or two initial or final letters usually due to the gender indicated by the termination or by the different Greek or Latin termination. Among the examples, only three pairs are comparable to ours, *Monochaete* closely follows the Greek, $\mu\omicron\nu\omicron$, one, and $\chi\alpha\iota\rho\eta$, bristle or hair; while *Monochaetum* is the latinized equivalent. *Desmostachys* is like the Greek roots, $\delta\epsilon\omicron\mu\omicron\varsigma$, bond, and $\sigma\tau\acute{\alpha}\chi\upsilon\varsigma$, spike; while *Desmostachya* is the Latinized form. *Elodes* is directly from the Greek, $\epsilon\lambda\acute{\omega}\delta\eta\varsigma$, marshy; and *Elodea* is its Latinized form. Like unto these is the pair *Glossopetalum* with its Latin termination, and *Glossopetalon* with its Greek termination. Under Article 70 and as illustrated by three pairs of examples under its Note 4, these two are to be considered different names, and not homonyms or orthographic variants. Thus, *Glossopetalon* Gray is to be accepted as a different name. It was effectively published, and is the valid name for this genus of some eight species of the arid regions of the western United States and northern Mexico. To make the names available under *Glossopetalon*, the following new combinations are proposed:

Glossopetalon pungens Brandg. var. *typica* (Ensign) comb. nov.

Forsellesia pungens (Brandg.) Heller var. *typica* Ensign, Am. Midl. Nat. 27: 503, 1942.

- G. *pungens* Brandg. var. *glabra* (Ensign) comb. nov.
F. pungens (Brandg.) Heller var. *glabra* Ensign, Am. Midl. Nat. 27:
 503, 1942.
- G. *Clokeyi* (Ensign) comb. nov.
F. Clokeyi Ensign, Am. Midl. Nat. 27: 504, 1942.
- G. *nevadensis* Gray forma *typica* (Ensign) comb. nov.
F. nevadensis (Gray) Greene forma *typica* Ensign, Am. Midl. Nat. 27:
 506, 1942.
- G. *nevadensis* Gray forma *glabra* (Ensign) comb. nov.
F. nevadensis (Gray) Greene forma *glabra* Ensign, Am. Midl. Nat. 27:
 506, 1942.
- G. *planitierum* (Ensign) comb. nov.
F. planitierum Ensign, Am. Midl. Nat. 27: 509, 1942.
- G. *spinescens* Gray var. *typica* (Ensign) comb. nov.
F. spinescens (Gray) Greene var. *typica* Ensign, Am. Midl. Nat. 27:
 510, 1942.
- G. *spinescens* Gray var. *mexicana* (Ensign) comb. nov.
F. spinescens (Gray) Greene var. *mexicana* Ensign, Am. Midl. Nat. 27:
 510, 1942.
- G. *texensis* (Ensign) comb. nov.
F. texensis Ensign, Am. Midl. Nat. 27: 510-511, 1942.

Ensign summarizes the geographic range of the genus (p. 502) but omits Mexico, though she describes one variety from Coahuila (p. 510). She states (p. 502) that, "The genus apparently grows best in dry limestone regions . . ." For *G. stipuliferum* (p. 507) she gives the habitat as "Growing on limestone from 2,000—5,500 ft." Several of the species may well favor habitats on limestone, but not all do. For instance, *G. stipuliferum* has its type locality at Lewiston, Idaho, on basalt. The collection St. John 9289 was on limestone cliffs as Lime Point, Asotin Co., Wash. That of Constance et al. 1012 was on diorite cliffs at Granite Creek, Idaho Co., Idaho. The species is one of the most abundant shrubs of the Grand Canyon of the Snake, and the writer observed it for years. Besides the above he has collections or records of it at twenty-three localities, all on basalt. The Californian localities which are listed by Ensign may be on limestone, though the habitat data printed does not so state. Certainly the species is not restricted to a limestone habitat; instead, it is much more abundant and widespread on volcanic rocks, especially on basalt.